



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/605,930	11/06/2003	Liwen Xu	81044242(FGT1865)	2929
28549	7590	01/13/2006	EXAMINER	
KEVIN G. MIERZWA ARTZ & ARTZ, P.C. 28333 TELEGRAPH ROAD, SUITE 250 SOUTHFIELD, MI 48034			NGUYEN, TAN QUANG	
			ART UNIT	PAPER NUMBER
			3661	

DATE MAILED: 01/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/605,930	Applicant(s) XU ET AL.	
	Examiner TAN Q. NGUYEN	Art Unit 3661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 September 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-160 is/are pending in the application.
- 4a) Of the above claim(s) 36-160 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAIL ACTION

Notice to Applicant(s)

1. This office action is responsive to the amendment filed on response to the September 27, 2005. As per request, claims 6 and 9 have been amended. The non-elected claims 36-160 have been withdrawn.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1-10, 14-16, 21-29, and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer (6,757,595) in view of Suzuki et al. (6,535,114).

5. With respect to claims 1 and 2, Bauer discloses a stability control system for an automotive vehicle which includes a rollover control system and a controller for generating a dynamic vehicle characteristic in response to the roll parameter (see at least the abstract, figure 3, column 2, lines 11-20, and column 3, line 45 to column 4, line 27).

6. Bauer suggests the roll parameter is typically estimated from available sensors as is known in the art (see column 3, lines 53-55). Bauer does not disclose a camera-based vision system for generating a roll angle. However, Suzuki et al. suggest a system and method for optically monitoring the environment of a moving vehicle which includes a camera for generating a roll parameter for use in controlling the engine, brake, transmission, steering, etc. (see figures 2, 4A-6). It would have been obvious to an ordinary skill in the art to incorporate the teaching of the Suzuki et al. into the system of Bauer in order to provide the system with the enhanced capability of optically monitoring the environment of a moving vehicle and using it for controlling the rollover of vehicle.

7. With respect to claim 3, Bauer also discloses that the system includes a yaw control system (see at least figure 2B and column 3, lines 28-44).

8. With respect to claim 4, Bauer also discloses that the system includes a pitch angle signal (see column 1, lines 19-26).

9. With respect to claims 5 and 6, Bauer further discloses that the system includes a lateral accelerometer signal (or lateral velocity) for determining a loss of control and use it for controlling the rollover for the vehicle (see at least column 1, lines 19-26, figures 2B, 3 and the related text).

10. With respect to claim 7, Bauer also discloses a longitudinal acceleration signal (or longitudinal velocity) for use in controlling the rollover (see column 1, lines 19-26).

11. With respect to claims 8-10, Bauer does not disclose a road departure signal or an in-path object signal for use in controlling the rollover for the vehicle. However, Suzuki et al. do suggest a method for optically monitoring the environment of a moving vehicle which includes the road departure and in-path object parameter (see at least the abstract). It would have been obvious to an ordinary skill to incorporate such teaching of Suzuki et al. into the system of Bauer in order to take the information of the area surrounding the moving vehicle for improving the controlling the rollover for the vehicle.

12. With respect to claims 14-16, Bauer also suggests the use of wheel speed, wheel slip, rotational moment, and body side slip into account for controlling rollover condition (see at least figures 2A, 2B and the related text).

13. Claims 21-29 and 33-35 are method claims corresponding to apparatus claims 1-10 and 14-16. Therefore, claims 21-29 and 33-35 are rejected for the same rationales set forth for claims 1-10 and 14-16.

14. Claims 11-13 and 30-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer and Suzuki et al. as applied to the claims above, and further in view of Griessbach (6,169,946).

15. Bauer and Suzuki et al. disclose the claimed invention as discussed above except a wheel lifted signal is used for controlling the roll controlling system. However, such feature is suggested in at least figure 3 and the related text of Griessbach. It would have been obvious to an ordinary skill in the art at the time the invention was made to incorporate the teaching of Griessbach into the combined system of Bauer and Suzuki et al. in order to use the wheel lift information in controlling the rollover, thereby to improving the vehicle safety.

Art Unit: 3661

16. Claims 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer and Suzuki et al. as applied to the claims above, and further in view of Ishikawa et al. (6,292,111).

17. Bauer and Suzuki et al. disclose the claimed invention as discussed above except for the camera-based vision system comprises a stereo pair of cameras, and can be mounted in front or rear and on the side of the vehicle. However, such system using the stereo cameras is suggested in at least figures 1E, 2, and the related text of the Ishikawa et al. It would have been obvious to one of an ordinary skill in the art to incorporate such teaching of Ishikawa et al. into the combination system of Bauer and Suzuki et al. in order to monitor better the environment surrounding the moving vehicle by using two cameras, one for the front or rear, and one on the side, for further providing the more accurately the inclination angle.

18. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bauer and Suzuki et al. as applied to the claims above, and further in view of Nishikawa (5,913,375).

19. Bauer and Suzuki et al. disclose the claimed invention as discussed above except that the system includes a radar system for generating environment sensing signal. However, such method of using both camera system and radar system for detecting the environment of the moving vehicle and as shown in at least figure 3 of the Nishikawa reference. It would have been obvious to an ordinary skill in the art to incorporate the teaching of Nishikawa into the combination system of Bauer and Suzuki et al. in order to provide the more accurate the information of the environment of the moving vehicle, which in turn improving the rollover control system.

Art Unit: 3661

Remarks

20. Claims 1-35 are rejected. Claims 36-160 have been withdrawn.

21. The Applicant's arguments filed on September 27, 2005 have been fully considered but they are deemed to be persuasive. However, upon further consideration and updated searches, the new ground of rejections has been set forth as above.

22. The following references are cited as being of general interest: Wielenga (6,065,558), Bayley (6,182,783), Barta et al. (2003/0055549), Park (2004/0128060), Stefan et al. (2005/0110227), Choi (2005/0114072), and Mattes et al. (2005/0168575).

23. Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Tan Q. Nguyen, whose telephone number is (571) 272-6966. The examiner can normally be reached on Monday-Thursday from 5:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Black, can be reached on (571) 272-6956.

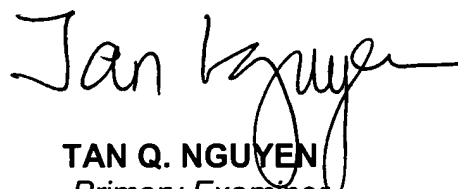
Any response to this action should be mailed to:

Commissioner of Patents and Trademarks
Washington, D.C. 20231

or faxed to the Official Fax Center: (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 3661


TAN Q. NGUYEN
Primary Examiner
Art Unit 3661

/tqn
January 9, 2006